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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,495	09/05/2003	Steven Jeffrey Goldberg	I-2-0397.1US	8356

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UNITED PLAZA, SUITE 1600  
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PHILADELPHIA, PA 19103

EXAMINER
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NGUYEN, KHAI MINH

ART UNIT	PAPER NUMBER
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2687

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/656,495

**Applicant(s)**

GOLDBERG, STEVEN JEFFREY

**Examiner**

Khai M Nguyen

**Art Unit**

2687

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/16/04, 6/28/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The references listed in the Information Disclosure Statement filed on April, 16, 2004 and June, 28, 2004 have been considered by the examiner (see attached PTO-1449 form or PTO/SB/08A and 08B forms).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Shapira, Joseph (W.O 02/15326 A2).

Regarding claim 1, Shapira teaches a wireless communication system for transmitting and receiving wireless communications using at least one beam (fig.1, fig.9, abstract, page.4, line 31 to page.5, line 8) comprising:

a plurality of WTRUs (page 2, lines 19-31, page.5, lines 16-24);

at least one beam forming antenna wherein at least one beam emanating from the beam forming antenna may be adjusted in at least a vertical dimension (fig.9, page 2, lines 11-18, page.13, line 24 to page.25, line 10, page.15, lines 29-35); and

a radio network controller for controlling the adjustment of the beam to optimize transmission between the antenna (fig.1, page.2, lines 11-18) and at least one WTRU (page.14, line 25 to page.15, line 8).

Regarding claim 2, Shapira teaches the wireless communication system of claim 1 wherein the beam is further adjusted in a horizontal dimension (fig.10, page 2, lines 11-18, page.13, line 24 to page.25, line 24)

Regarding claim 3, Shapira teaches the wireless communication system of claim 1 wherein a Node B is provided for generating control signals for adjusting the beam in accordance with tilt information provided by the radio network controller (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 24).

Regarding claim 4, Shapira teaches the wireless communication system of claim 1 wherein tilt information is sent from the radio network controller to the antenna wherein control signals are generated for adjusting the beam in accordance with tilt

information provided by the radio network controller (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 24).

Regarding claim 5, Shapira teaches the wireless communication system of claim 1 wherein the beam is tilted downward to reduce interference to and from another antenna (page.11, lines 17-37).

Regarding claim 6, Shapira teaches the wireless communication system of claim 1 wherein the beam is adjusted to account for variations in elevation between the WTRUs (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 24).

Regarding claim 7, Shapira teaches the wireless communication system of claim 1 wherein the beam is adjusted to break up null areas wherein transmission signals are not decodable (page.14, line 25 to page.15, line 8).

Regarding claim 8, Shapira teaches the wireless communication system of claim 7 wherein the beam is adjusted by dithering the beam in at least a vertical dimension (fig.9, page 2, lines 11-18, page.13, line 24 to page.25, line 10, page.15, lines 29-35).

Regarding claim 9, Shapira teaches the wireless communication system of claim 7 wherein the beam is adjusted by dithering the beam in a vertical and horizontal dimension (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 10, page.15, lines 29-35).

Regarding claim 10, Shapira teaches the wireless communication system of claim 1 wherein the beam is adjusted to provide multiple signals along multiple paths to increase the data rate at which a receiving WTRU may receive data contained within the signals (fig.9, page 2, lines 11-18, page.13, line 24 to page.25, line 10, page.15, lines 29-35).

Regarding claim 11, Shapira teaches a method for dynamically adjusting beams to optimize transmissions within a wireless communication system (fig.1, fig.9-10, abstract, page.4, line 31 to page.5, line 8, page.9, lines 8-10) comprising:

computing tilt information in real-time based on actual conditions in a wireless communication system (fig.10, page.11, lines 24-37, page.14, lines 11-37); and

adjusting at least one beam in at least a vertical dimension based on the computed tilt information (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 10, page.15, lines 29-35).

Regarding claim 12, Shapira teaches the method of claim 11 further comprising the step of computing tilt information to adjust the beam to minimize interference to and from another antenna (page.11, lines 17-37).

Regarding claim 13, Shapira teaches the method of claim 11 further comprising the step of computing tilt information to adjust the beam to account for variations in elevation between WTRUs (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 24).

Regarding claim 14, Shapira teaches the method of claim 11 further comprising the step of computing tilt information so that the beam is dithered to break up null areas wherein transmission signals are not decodable (page.14, line 25 to page.15, line 8).

Regarding claim 15, Shapira teaches a wireless communication system for transmitting and receiving wireless communications using at least one beam (fig.1, fig.9, abstract, page.4, line 31 to page.5, line 8) comprising:

a plurality of WTRUs (page 2, lines 19-31, page.5, lines 16-24);

a radio network controller (page.4, line 21 to page.5, line 8); at least one beam forming antenna wherein a beam emanating from the beam forming antenna may be

adjusted in at least a vertical dimension (fig.9, page 2, lines 11-18, page.13, line 24 to page.25, line 10, page.15, lines 29-35); and

a Node B for controlling the adjustment of the beam to optimize transmission between the antenna and at least one WTRU (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 24).

Regarding claim 16, Shapira teaches the wireless communication system of claim 15 wherein information from the radio network controller and the plurality of WTRUs is used to compute tilt information for adjusting the beam (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 24).

### ***Citation of Pertinent Prior Art***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Shapira et al.** (U.S.Pub-20040063467) discloses Antenna arrangements for flexible coverage of a sector in a cellular network.

**Thomas** (U.S.Pat-6697642) discloses Wireless communication apparatus.

**Yla-Jaaski et al.** (U.S.Pub-20040005870) discloses Synchronization of transmitter and receiver frequencies in multi-access networks.



**Haumont et al.** (U.S.Pub-20040258019) discloses Forwarding a terminal identity between core network nodes.

**Ylitalo** (U.S.Pub-20040106437) discloses Data transmission method and arrangement.

### ***Conclusion***

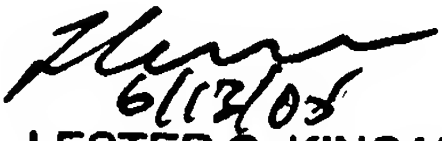
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M Nguyen whose telephone number is 571.272.7923. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571.272.7922. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khai Nguyen  
Au:2687

6/9/2005

  
6/13/05  
LESTER G. KINCAID  
PRIMARY EXAMINER